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ABSTRACT

This New York City Public Schools program was designed to augment the basic instruction of students with severe handicaps who were formerly educated within state-operated or state-supported schools or institutions. The program's teacher trainer provided up-to-date materials and equipment, individual consultation, support, and group training to teachers of program-eligible students. Teachers reported receiving a total of 1,125 items consisting of prevocational and vocational, audiovisual, adaptive, and communication-related equipment and materials, as well as computer hardware and software. Staffing was limited by problems in hiring a computer teacher trainer, and other problems occurred in timely identification of students and acquisition of equipment. While respondents overall were enthusiastic about service received, objectives for student outcomes were not met. Participants were especially enthusiastic about the dysphagia and augmentative communication workshops and the Arts in Residency programs. Recommendations are made for expanded staffing, improved identification and tracking procedures, simplified equipment purchasing processes, and continued inservice training. (PB)

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OREA Report

DISTRICT 75/CITYWIDE
E.C.I.A. CHAPTER 1, P.L. 89-313
HANDICAPPED PROGRAM
1989-90

STATE REPORT

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DISTRICT 75/CITYWIDE
E.C.I.A. CHAPTER 1, P.L. 89-313
HANDICAPPED PROGRAM
1989-90

STATE REPORT

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8/90

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This report was prepared by the Special Education Evaluation Unit, Ronald C. Miller, Unit Manager, of the Office of Research, Evaluation, and Assessment (OREA) of the New York City Public Schools. Marcia Torres, Evaluation Specialist, supervised the study and William Askins was the Senior Consultant. Consultant Ruth Margolis conducted site visits and other data collection. The data analysis was conducted by Arnold Simmel, Project Analyst, and Data Analyst Xuping Fu. Consultant Jillian Shagan helped prepare data for quantitative analysis and developed codes used in aggregation of data. Consultants William Tierney and Elizabeth Ferry helped prepare the data for quantitative analysis.

We would also like to thank Gaylen Moore who edited this report and Donna Manton who was responsible for designing and processing the final draft.

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DISTRICT 75/CITYWIDE P.L. 89-313
SUPPLEMENTARY SERVICES FOR PREVIOUSLY
INSTITUTIONALIZED NON-PUBLIC SCHOOL STUDENTS

STATE SUMMARY NARRATIVE

1) The project was fully implemented except for the computer teacher trainer position, which was not filled. Program activities that depended on this position were not fully carried out.

2) No special facilities were provided. The program served students at citywide sites in elementary, intermediate and junior high schools, at occupational centers, and at a school for the deaf. Space was reserved at Community Mental Health Centers in three New York City boroughs so that vendors could demonstrate equipment and materials to school staff. Vendors' demonstrations of equipment and materials were conducted at school sites.

3) The number of staff members was not sufficient. Citywide P.L. 89-313 staff consisted of the project facilitator who was on medical leave for approximately 60 percent of the school year and one teacher trainer. The second teacher trainer position that had been planned (computer teacher trainer) could not be filled. Applicants felt that the level of financial remuneration was not consistent with the level of competency required for the position. Additionally, the project had no clerical assistance.

4) The proposed objectives were not altered or omitted.

5) Program activities, techniques, and strategies were implemented as proposed except for computer training, which was not fully implemented. The activities and techniques that were of greatest assistance in achieving student objectives were in the areas of augmentative communication and language development. Since many handicapped students have problems communicating their needs and interacting with others, improving their ability to communicate by providing them with appropriate devices produced marked results. The minimum intensity and duration of exposure that each learner needed varied according to the student's age, ability, handicap, and attention span.

6) Teachers reported receiving a total of 1,125 items consisting of general instructional materials and equipment, which included prevocational and vocational materials, audiovisual, adaptive, and communication-related equipment and materials as well as computer hardware and software. General instructional equipment was the most frequently utilized category (79 percent), followed by computer equipment and materials (21 percent). Computer equipment was used in teaching all areas of the curriculum, including academic subjects, prevocational/vocational content, communication, and speech and language development.

7) Home involvement was not applicable. However, parents were involved in the program through their attendance at workshops and their meetings with program staff and teachers. The program staff strongly encouraged parents of students to participate in parent involvement activities sponsored by community agencies.

8) Program implementation problems involved the length of time between ordering and receiving equipment and materials, and the insufficiency of staff.

9) Improvements to the program would be: the prompt delivery of materials and equipment at program sites to ensure their availability at the start of the fall semester; making clerical staff available; hiring a computer teacher trainer; designating an augmentative communication coordinator at each school; and continuing and expanding training in the use of equipment and devises for students, their parents and the larger community.

10) The program's introduction of dysphagia training and its expanded involvement in augmentative communication training (conducted by an expert in the field) has produced a positive cumulative effect consisting of the program's increased capacity to address the needs of severely handicapped students and helping them meet their I.E.P. goals.

II. PROJECT PARTICIPANT INFORMATION

Age of Children Participating	TYPE OF HANDICAPPING CONDITION												
	Autistic	Emotionally Disturbed	Learning Disabled	Mentally Retarded	Deaf	Hard of Hearing	Speech Impaired	Visually Impaired	Orthopedically Impaired	Other Health Impaired	Multiply Handicapped	Deaf and Blind	TOTAL
0 - 4	2	9		6		1		3			13		34
5 - 11	104	182		84	4	4	1	9	2	2	183	1	576
12 - 21	100	125		279	5	2		7		7	172	1	698
TOTAL	206	316		369	9	7	1	19	2	9	368	2	1,308

III. PROJECT PARTICIPANT ACHIEVEMENT INFORMATION

Indicate in column "A" the number of pupils actually served in each curriculum area. In column "B" indicate the number of pupils who met 75% of their objectives in each of the curriculum areas. Use the following example in completing the table below. A school district proposed that 20 children would be instructed in socialization skills. However, 18 children were actually instructed. Out of the 18 children instructed, 12 of them met 75% of their objectives in socialization.

EXAMPLE:

Code	Curriculum Area	A	B
07	Socialization	18	12

Code	Curriculum Area	Number of Pupils	
		A	B
	CULTURE ENRICHMENT		
01	Music	72	55
02	Arts/Crafts	57	43
03	Drama		
04	Dance		
05	Other Cultural Studies	36	27
	AFFECTIVE AREA		
06	Maladaptive Behavior Extinction/Emotional Control	118	36
07	Socialization	345	238
	INDEPENDENT LIVING SKILLS		
08	Personal Hygiene/Health Care (Activities of Daily Living)	456	77
09	Societal/Survival	170	121
	ACADEMIC SKILLS		
10	Readiness (Reading and Mathematics)	283	24

Code	Curriculum Area	Number of Pupils	
		A	B
	ACADEMIC SKILLS (CONT'D)		
11	General Cognitive Readiness	92	78
12	Reading	62	40
13	Mathematics	74	43
14	Science		
15	Social Studies		
16	English Language Arts/ Spelling/Writing		
17	English as a Second Language (ESL)		
18	Speech (Process & Correction)		
19	Communication/Language Development (Verbal & Nonverbal)	442	293
	HEALTH,PHYS. ED & RECREATION		
20	Physical Education		

Code	Curriculum Area	Number of Pupils	
		A	B
	HEALTH,PHYS. ED & RECREATION (CONT'D)		
21	Drug Education		
22	Family & Sex Education		
23	Leisure Activities & Pursuits		
	SENSORY & MOTOR DEV.		
24	Auditory (Perception & Processing)	24	8
25	Visual (Perception & Processing)	80	61
26	Motor Development	205	152
27	Other Sensory Development	47	47
	VOC./OCC. EDUCATION		
28	Career Education	405	260
29	Domestic Arts (Home Economics, Industrial Arts)	160	145
30	Vocational/Occupational/Workshop Work Activities/Work Study	13	10

8 Column "B" may only be equal to or less than Column "A".

CITYWIDE P.L. 89-313 PROGRAM
1989-90

SUMMARY

District 75 of the Division of Special Education designed and operated the Citywide Public Law 89-313 program (C.W. P.L. 89-313) to augment the basic instruction of students with severe handicaps who were formerly educated within state-operated or state-supported schools or institutions. The program was designed to be staffed by one program coordinator and two teacher trainers; however due to a medical leave and problems in the hiring of a computer teacher trainer, for most of the year the program was staffed by one teacher trainer who performed her duties as well as those of the program coordinator. She provided up-to-date materials and equipment, individual consultation, support, and group training in topics related to the program and relevant to the student population to teachers of program-eligible students.

The program was successfully implemented except for the untimely identification of eligible students and the arrival of equipment. Equipment Users reported extensive use of program equipment in student instruction. About 1,320 students participated in the program and approximately 1,125 pieces of equipment, materials and supplies were ordered. Overall respondents were positive about the training and other support which the program provided. They were particularly enthusiastic about the dysphagia and augmentative/communication workshops, requesting that they be continued the following year and the Arts in Residency programs.

OREA achievement data showed that overall 52 percent of the students who attended 20 sessions or more mastered 75 percent of their objectives. This outcome was lower than the proposed 80 percent of students, therefore the evaluation objective was not met.

Based on the findings of this evaluation, the following recommendations are proposed:

- Expedite the identification and tracking of program-eligible students, by giving priority to the establishment of an effective procedure with the Committee on Special Education.
- Continue staff workshops with experienced presenters that address the needs of the student population.
- Expand the staffing of the C.W. P.L. 89-313 program to include one program facilitator, two experienced teacher trainers, and one clerical assistant. This is crucial for the successful implementation of the program.
- Simplify the ordering process so that equipment arrives on time and students can achieve their I.E.P. goals.

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I. INTRODUCTION

The 1989-90 Citywide Public Law 89-313 program (C.W. P.L. 89-313) provides supplementary services for previously institutionalized students currently enrolled in New York City public schools. The program is federally funded and is sponsored by the New York State Education Department (S.E.D.). The Division of Special Education's Office of Citywide Programs (District 75) is responsible for the overall operation of the program.

C.W. P.L. 89-313 is designed to provide services to students between five and 21 years of age who have severe or low incidence handicaps. The students are multiply handicapped, mentally retarded, emotionally disturbed, autistic, or physically impaired. Program service categories that serve these students are Specialized Instructional Environments (SIEs) I to XII. The program is unique in that it provides funds so that eligible students can use up-to-date technological and specialized equipment to meet their individual educational needs. This year, the program was designed to serve about 1,320 students at 51 organizations with approximately 200 sites.

PROGRAM GOALS

The general goals of Citywide P.L. 89-313 are to provide eligible students with up-to-date technological equipment and supplies that will facilitate their acquisition of skills in the following curriculum areas: activities of daily living; communication/ language development; gross motor coordination; career education; reading, language, and mathematics readiness; and cultural studies.

PROGRAM OBJECTIVES

This year's program objective was that by the conclusion of the project period (from September 11, 1989 to June 27, 1990), participating students would demonstrate mastery of 75 percent of the objectives set for them - between two and four new skills. The Office of Research, Evaluation, and Assessment (OREA) measured the students' achievements by one of the following means: the Behavioral Characteristics Progression Scale (B.C.P. or VORT),* the Track IV In-Depth Analysis,** or the Career Education/Prevocational Skills Assessment Inventory.***

PROGRAM DESCRIPTION

Application Process

An integral part of the program implementation was the application process, which consisted of identifying eligible C.W. P.L. 89-313 students and ordering appropriate, up-to-date technological equipment for them. The expected procedure for these two processes and as their optimal schedule are presented below.

Identification of Eligible Students. Students who had previously attended state-operated or state-supported schools, and were currently enrolled in SIEs were identified. Schools that these students attend were considered eligible to apply for Citywide P.L. 89-313 funds and program services.

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*Behavioral Characteristics Progression Scale developed by the VORT Corp., 1973.

**Track IV In-depth Analysis, an assessment instrument for use with the severely and profoundly retarded developed by the Division of Special Education, New York City Board of Education, 1980.

***Career Education/Prevocational Skills Inventory developed by the Division of Special Education, New York City Board of Education, 1979.

Student eligibility was established through a collaboration of District 75, the New York City Board of Education's Central Office (B.O.E.), and the State Education Department (S.E.D.), where the list of eligible students was corroborated. B.O.E. submitted the list of eligible students to S.E.D. by the December prior to the program year, so that the process of ordering equipment could be initiated.

Equipment Ordering Process. School administrators and classroom teachers at designated C.W. P.L. 89-313 sites prepared an initial list of equipment needed by students at their schools. This list was sent to District 75 administrators and to B.O.E. staff for review, then on to S.E.D. (ideally in July) for final approval, and then returned to the originating schools. The originating schools placed orders through District 75 administrators and the administrators sent them to B.O.E.'s Bureau of Supplies and Office of Finance, who made certain that these orders met all required specifications.

Program Staffing

According to the C.W. P.L. 89-313 design for 1989-90 specifications, the program was to be staffed by one program coordinator and two resource specialists. The program coordinator was responsible for monitoring and assisting in the implementation of all aspects of the program -- providing instructional supplies and equipment to C.W. P.L. 89-313 students, coordinating staff development, and cooperating in evaluation activities.

The two resource specialists were to provide assistance and training to classroom teachers of eligible students in the use of specific equipment and supplies. One resource specialist was to provide instructional support and training, focusing on the use of adaptive equipment to facilitate proper positioning of students, and to

provide assistance in the development and enhancement of augmentative communication programs. The other resource specialist was to assist in the selection and purchasing of computer hardware and software compatible with equipment already in place, which was needed to address program students' I.E.P. goals. This specialist was to organize workshops that highlight new resources and focus on the integration of computer technology designed to enhance the language development and communications skills of severely handicapped students. The specialist was also to assist in the selection and ordering of appropriate equipment and materials needed to help each student achieve his/her potential for independent and productive living.

Special Program Activities

In addition to ordering equipment and providing related training, the C.W. P.L. 89-313 program also proposed a number of special activities for the program year.

The Augmentative Communication/Language Development Centers for SIE I (P811 M, P811 X, P811 Q, and 37 R), and SIE II students (P138 M, PO10 X, PO53 K, P396 K, and 37 R) which were direct outgrowths of the original center pilots (P811 K and P233 Q), were to receive continued support to ensure their growth. The program also proposed to examine the available electronic communications systems and optimally pair these devices with nonverbal SIE III autistic students, particularly at 176 X and 37 R; to expand on-site assessments in order to determine which students needed communications devices, and provide these students with viable personal communications systems; and to establish a communications class for staff at 811 Q (SIE I) focusing on the integration of electronic communications devices into the daily classroom routine, District 75 also intended to increase the availability of computers to

the severely handicapped, and to observe and assess SIE II students who had been using them with adaptive peripherals, in order to determine how this equipment had helped them acquire new communications skills, and develop language, and how it had enhanced the readiness curriculum. The program also proposed to pilot a language communications software prototype system for SIE III autistic students developed by the staff of 176 X in conjunction with Bank Street College of Education. It utilized the Macintosh computer and the Hypercard framework, and was based on a method currently in use with some SIE III students to help them structure language by using the Fitzgerald Key--a clear and simple system for producing consistent sentence structure. The program also proposed to expand this method to other Citywide programs via the use of adaptive peripherals.

REPORT FORMAT

This report is organized as follows: Chapter II describes the evaluation methodology; Chapter III presents the findings, including program implementation and student outcomes; and Chapter IV offers conclusions and recommendations based on evaluation findings.

II. EVALUATION METHODOLOGY

OREA's evaluation of the C.W. P.L. 89-313 program addressed two major areas. The first was program implementation, which included general information required to complete the S.E.D. summary narrative located at the front of this report, as well as a more detailed account of program services (student eligibility and selection criteria, program materials and equipment, training, program activities, and recommendations for improving the program). OREA also addressed program outcome objectives, which are presented in S.E.D.'s project participant information form, also found at the front of this report, in which OREA presents the total number of students participating in the program, the number of students within each handicapping condition, and the number and percentage of students who mastered 75 percent of their objectives in specific curriculum areas. OREA also collected achievement information on students who received 20 or more sessions (including an overall frequency distribution of the number of skills mastered by them, the percentage of students who had mastered 75 percent of their objectives in target curriculum areas, and the percentage of students who had mastered 75 percent of their objectives as measured by each of the assessment instruments).

EVALUATION QUESTIONS

The following are the program implementation questions that OREA addressed in its evaluation.

Program Implementation

Student Characteristics and Eligibility Requirements:

- What were the characteristics of the student population?
- What procedures were used to identify and select eligible students for the program?

Program Staffing:

- What did program staffing consist of?
- What percent of the teacher-trainers' time was spent visiting sites and working with students, teachers, guidance counselors, and site coordinators?

Provision of Materials, Equipment and Related Support:

- What procedures were used to order program materials and equipment?
- What percent of staff received equipment and materials in a timely fashion?
- Was the plan to order special equipment for students and provide teacher training in their use at specific sites carried out (communication equipment at P233 Q; computers and adaptive peripherals at P233 Q; and the MacIntosh computer and the Hypercard Framework Program at P176 X)?
- How did equipment users and coordinators rate program materials and equipment with regard to their usefulness in helping students achieve their I.E.P. goals?
- How did equipment users and site coordinators utilize the other supportive services the program provided?
- Did program staff carry out on-site assessments to determine the number of students who needed communications devices? How many students were assessed?

Training:

- Was augmentative communication/language development for SIE III (autistic) students implemented at P 176 X and 37 R?
- Were workshops at SIE I and II programs on dysphagia implemented as planned?
- How many and what percentage of teachers received augmentative communication and language development training?
- How did participants rate the quality of training?

The Cultural Arts Program:

- Were cultural arts activities (Young Audiences, Creative Arts, and the West End Symphony) implemented as planned?
- What did program activities consist of?

Program Feedback:

- What were site coordinators' and equipment users' perceptions of overall program quality?
- What were the program's strengths and weaknesses as perceived by site coordinators and equipment users?
- What recommendations did equipment users (teachers, coordinators, and Citywide P.L. 89-313 teacher trainers) suggest for future program cycles?

Program Outcome

- Did 80 percent of participating students master 75 percent of their objectives (a minimum of two to four new skills)?
- What was the frequency distribution of the number of skills mastered by program students?
- What percentage of program students mastered program objectives, as measured by each of the assessment instruments)?

EVALUATION PROCEDURES

Sample

The OREA evaluation design included the full population of C.W. P.L. 89-313 student participants, the site supervisor at each of the 51 program organizations and four specialized programs, and at least one equipment user at each of the 108 program sites. In all, OREA collected 1,317 student data retrieval forms, 40 site supervisor surveys, 97 equipment user surveys and one program facilitator/teacher trainer interview.

Instruments

OREA staff developed a student data retrieval form designed to gather general student background information, student achievement data, and general program information including equipment utilization.

OREA also developed surveys for C.W. P.L. 89-313 equipment users and site supervisors, and developed an interview form for the program facilitator and teacher trainer. These instruments consisted of closed- and open-ended questions, whose content was primarily on issues of program implementation.

Data Collection

In the spring of 1990, OREA forwarded student data retrieval forms to the C.W. P.L. 89-313 program facilitator, who distributed them to program sites and collected them at the end of the school year. OREA consultants surveyed equipment users and site supervisors, and interviewed the program facilitator/teacher trainer during April and May of 1990.

Data Analysis

OREA staff analyzed survey and interview responses to questions about program implementation and future needs. Particular attention was given to respondents' perceptions of factors that either enhanced or inhibited program success.

OREA staff computed the proportion of objectives each student mastered by curriculum area on each criterion-referenced test. They also calculated the number of skills attained as a percentage of the objectives attempted by each student.

III. EVALUATION FINDINGS

This chapter presents OREA's findings on program implementation (including student characteristics, student identification procedure, program staffing, provision of materials, equipment, and support, training, the Cultural Arts Program, and program feedback) and outcome objectives (the frequency distribution of the number of skills mastered by program students, the percent of program students who mastered 75 percent of their objectives in targeted curriculum areas, and the percent of program students who mastered program objectives as measured by each of the assessment instruments).

PROGRAM IMPLEMENTATION

Student Characteristics

OREA data indicated that the program provided services to 1,320 students whose ages ranged from five to twenty-one during the 1989-90 cycle. These students were severely handicapped in the following categories: 28 percent were mentally retarded, 27.9 percent were multiply handicapped, 24 percent were emotionally disturbed, 15.6 percent were autistic, and 3.7 percent had physical impairments. Program students attended the following program service categories: 25 percent were in Specialized Instructional Environment (SIE) II, 15.9 percent were in SIE III, 12.2 percent were in SIE I, 9.8 percent were in SIE VII, and the remaining 11.9 percent were in other program service categories.

Student Identification Procedure

Procedures used to identify eligible students for the C.W. P.L. 89-313 program

were the following. At the beginning of the school year, the program facilitator sent letters to site staff asking them to notify the Committee on Special Education (C.S.E.) of those students who, in their judgement, were eligible for the program. To be eligible, these students had to have been formerly educated within state-operated or state-supported schools or institutions. The C.S.E. then processed a form on each student and sent it to the State. The State reviewed this form to make a determination about the eligibility of individual students for C.W. P.L. 89-313 funds. Only two of the 43 coordinator-respondents (five percent) reported that there had been an improvement in the efficiency of this process as compared with the previous year.

Program Staffing

The C.W. P.L. 89-313 design for 1989-90 specified that the program was to be staffed by one program facilitator and two teacher trainers, and that approximately 50 to 70 percent of the teacher trainers' time was to be spent visiting sites and working directly with C.W. P.L. 89-313 students, classroom teachers, agency personnel, and special education site coordinators and supervisors. The frequency of site visits depended on the number of eligible program students, pupil attendance patterns, the experience of the classroom teacher, and the degree of instructional support needed at each site. In general, however, at least 50 percent of the teacher trainer's time was spent making site visits.

This year, program staffing consisted of only one teacher trainer. Respondents reported that applicants for the second teacher-trainer position found the level of financial remuneration inconsistent with the level of competency and responsibilities required. Another important staffing factor was that the program facilitator was on

medical leave for 60 percent of the school year. Thus, the one teacher trainer took on the role of acting facilitator in addition to fulfilling her own responsibilities.

Provision of Materials, Equipment, and Support

Equipment Ordering Process. The coordinator at each site consulted with classroom teachers, specialty teachers, related service providers, and administrators to determine which pieces of equipment would be most appropriate for students. Thirty percent of the site coordinators who responded to OREA's survey reported that they had also conferred with C.W. P.L. 89-313 staff during in this process.

Staff ordered special communications equipment for students at P233 Q and the coordinator provided training to the staff in its use. A computer and adaptive peripherals were ordered for P233 Q to improve students' communication and visual tracking skills. As planned, the program ordered augmentative communications, computer systems with color monitors, printers, a unidisk drive, a printer, an imagewriter, and a laser printer for P176 X. A workshop on the use of small portable devices appropriate for autistic students was held for administrators, staff developers, and speech teachers. Seventy-seven percent of the coordinators reported that C.W. P.L. 89-313 materials and equipment had been very useful in helping students achieve their I.E.P. goals.

Of the 72 equipment users who responded to the question, 58 percent reported that the equipment had begun to arrive in December and January; 21 percent reported that it had arrived in February; and 19 percent reported that it had arrived in March, April, or May. Twenty-three percent of the respondents reported that they were still waiting to receive equipment at the end of the school year.

Usefulness of Equipment. During 1989-90, teachers received approximately 1,125 pieces of equipment, materials, and supplies. OREA asked teachers to identify up to five categories of materials, equipment, or support which they used in student instruction (see Table 1). Teachers reported that they had used C.W. P.L. 89-313 equipment to provide instruction to 1,320 students, and that they most frequently used general instructional materials, prevocational/vocational materials, and audiovisual hardware (75.4 percent, 56.2 percent, and 52.5 percent respectively). Teachers reported that the next most frequently utilized resource categories were computer hardware and software, and communications materials and equipment. Teachers reported using this category with 44.5 percent of students. This was a 20 percent increase over last year's rate of utilization of this category. This increase reflects the program's responsiveness to the needs of hearing and language impaired students.

OREA consultants also analyzed equipment users' perceptions of the usefulness of certain specialized equipment they had received. At P233 Q equipment users reported that augmentative communication equipment had been very effective in facilitating the process of accomplishing instructional goals with program students. At P176 X, a software package was ordered to expand the computer-based instructional capacity of the site through the creation of a new system designed to facilitate the language development of autistic students. The package was specifically developed for this student population and adapted the Fitzgerald Key Method, a system that uses clear, simple, and consistent sentence structure to help students learn to communicate their specific needs. In conjunction with Bank Street College of Education, the staff at P176 X developed a software prototype of the Adapted Fitzgerald Key Method that reflected the type of language instruction they thought necessary for these students.

Table 1

Students whose Teachers Received
Materials, Equipment, or Support

(N = 1,370)

	Number of Students	Percent of Students
General Instructional Materials	993	75.4
Prevocational/Vocational Materials	740	56.2
Audio-Visual Hardware	692	52.5
Computer Hardware and Software	600	45.6
Adaptive Equipment	387	29.4
Communications Equipment and Materials	586	44.5
Fitzgerald Key	43	3.3
Other Materials and Equipment	87	6.6
General Support	131	9.9

Source: OREA-developed Student Data Retrieval Form

- *The teachers of more than half of the participating students received general instructional materials, prevocational/vocational materials, and audiovisual hardware.*

Preliminary results showed that the students were drawn to the program and that they transferred the communications skills they had acquired with this computerized system to their daily activities in the classroom. The expansion of this project will consist of using the Macintosh computers with the Adapted Fitzgerald Key Method.

Of 88 respondents (equipment users and site coordinators), 97 percent positively rated the C.W. P.L. 89-313 materials and equipment with regard to their usefulness in helping students achieve their I.E.P. goals.

Utilization of Program Support. One of the stated objectives was for program staff to carry out on-site assessments to determine the number of students who needed communications devices. Teachers reported that they had used the program teacher trainer's expertise in student assessment and that approximately 12 individual assessments had been conducted. This limited number of assessments may have been due to the lack of administrative assistance and the fact that the one teacher trainer had assumed the role of the project facilitator.

The program teacher trainer also helped teachers develop learning objectives for their students and select equipment that would best meet these students' needs. She conducted a number of individual on-site student assessments based on her primary area of expertise--communication and language development. Teachers reported that the support they received from the teacher trainer was helpful. Twenty-two percent of teacher-respondents stated that they would like additional assistance and training from the teacher trainer in the selection and ordering of augmentative equipment; and 17 percent stated that they wanted additional assistance in the identification of eligible students, in student assessment, and in curriculum planning.

Training

Augmentative Communication and Language Development. Training in augmentative alternative communication and language development for SIE III (autistic) students was implemented at P176 X. The teacher trainer/acting facilitator met ten times with staff to discuss the introduction of electronic equipment to improve the communications skills of SIE III students; the expansion of the computer program; the use of augmentative systems and computers; and the demonstration of equipment by vendors; as well as establishing procedures for assessing students, making a videotape of student/teacher interaction, and developing students' communication skills in the classroom. The two equipment users from P.S. 37 R who completed surveys, indicated that there was an augmentative communication lab at their school and that the training they had received had been very useful. Twenty-eight percent of the 46 respondents reported that they had received augmentative training. Overall, of the 15 equipment users who responded to the item on the usefulness of training, 93 percent were positive.

Dysphagia Training. Of 52 respondents, 46 percent indicated that they had received dysphagia training. Teachers reported that they had used the information from staff development sessions on dysphagia training and augmentative communication instruction with 99 percent of their students. OREA observed a dysphagia training session that covered "Abnormal Patterns of Motor Development that Contribute to Feeding Problems." The presenter, a neurodevelopment therapist, used a hands-on approach with 50 staff participants (speech therapists, classroom teachers, and paraprofessionals) to evaluate and develop a feeding program for a 17-year-old severely dystonic student. Participants found the workshop informative and helpful.

Ninety-six percent of the 25 respondents who commented on the usefulness of this training responded positively.

Other Training. Forty-seven percent of the 57 equipment users who responded to the item indicated that they had attended other training workshops. Thirty-six respondents identified the following topics as having been covered at these sessions: the availability and use of augmentative adaptive devices (55 percent) and the use of computer hardware/software (17 percent). All 27 equipment users who responded to the item reported that training had been useful.

The Cultural Arts Program

The Cultural Arts program was implemented as proposed for SIEs I, VII, and X students. Forty-five sites had performances. Out of a sample of 90 equipment users, 47 percent stated that their students had attended programs during the year. Programs included assembly, musical and creative drama, role playing, movement therapy, and sex and drug education. Ninety-five percent of the respondents found the Cultural Arts program useful.

PROGRAM FEEDBACK

The site coordinators and equipment users stated that the equipment purchased through the program had been very useful, and that the program had been very beneficial to students.

Program Strengths. Of the 99 respondents (33 coordinators and 66 equipment users), 74 percent reacted positively to the usefulness of the C.W. P.L. 89-313 program. Their comments included the following: students were able to work toward greater independence; some students passed the R.C.T.s; computer work enabled

autistic students to acquire many new skills and it helped many other aspects of their learning; augmentative/communication equipment for language impaired students enabled them to better communicate; dysphagia training was very helpful to students with related problems; and Cultural Arts activities were meaningful to participating students.

Program Weaknesses. Respondents identified two overall factors that impeded program implementation: the identification of program-eligible students, and the late arrival of equipment. They stated that efforts to improve the process of meeting the State Education Department's (S.E.D.) deadline for submission of the list of eligible students had not been effective. With regard to the problem of the late arrival of equipment, 30 percent of the coordinators reported receiving equipment very late in the year and 30 percent reported not having received it at all. New and effective ways to accomplish these tasks were very much needed.

Recommendations. Equipment users and site coordinators made the following recommendations for improving the program: there should be more augmentative/ communication and dysphagia workshops; program procedures should be clarified; identification of eligible program students and delivery of program materials and equipment should be more timely. They suggested that a way of doing the later would be to produce and distribute a minibook listing program procedures, including procedures for ordering equipment and materials, criteria for identifying eligible program students, and a calendar of program activities for the full year. Finally, as coverage of the entire program was conducted by one teacher-trainer the lack of adequate program staffing was identified as a problem; it limited the number of student assessments completed and the number of computer based activities for students, as

well as many other program activities.

Summary

District 75 implemented the C.W. P.L. 89-313 program during the 1989-90 cycle. Although the original staffing design included two teacher trainers and one facilitator, after December, the program was staffed by only one teacher trainer, who also functioned as the program facilitator. Despite her many duties, this teacher trainer provided materials, equipment, and support to teachers of program students. She assisted teachers in selecting appropriate equipment and assessing students, provided and made arrangements for training, coordinated the arts in residency program, and assisted the teachers in a number of other ways. Program support took the form of individual consultations, group workshops, and student assessments. Respondents found the support that the program provided very useful, and overall, found program implementation quite satisfactory. However, factors that impeded the process were the identification of eligible students, the late arrival of equipment, and the understaffing of the program.

OUTCOME OBJECTIVES

OREA evaluators presented student achievement information in two ways: by curriculum area, as reported by teachers of program students (presented in S.E.D.'s Project Participant Information Sheet at the front of this report); and by students' exposure to program interventions (OREA operationally defined this as a minimum of 20 sessions). This achievement data is presented in Tables 2, 3, and 4 which follow.

Teachers used the Behavioral Characteristics Progression Scale (B.C.P., or VORT), the Track IV In-Depth Analysis, and the Career Education/Prevocational Skills

Assessment Inventory to measure student skill mastery. The following instrument items measured mastery of skills in each curriculum area: B.C.P. strands 3-10, 23, and 24, and Track IV content areas 2 and 6 measured objectives in the area of activities of daily living; B.C.P. strands 18-22, 30, 46-48, 57, and 58, and Track IV content area 4 measured communication/language development; the Career Education Pre-vocational Skills Assessment Inventory, B.C.P. strands 25, 26, 33, 39, 42, and 45, and Track IV content area 8 measured career education. The following analyses include data only from those students who attended at least 20 sessions.

In the current program cycle, 78 percent of the students mastered three objectives (see Table 2). This was higher than the percentage of students mastering the same number of objectives in the previous program cycle (75.7 percent). In the current year, 42 students (3.5 percent) acquired no new skills, a slightly lower percentage than those acquiring no new skills in 1988-89 (5.1 percent). However, this year, students mastered an average of 3.4 objectives; this is the same as the average number of objectives mastered during the prior year.

The percentage of students achieving 75 percent mastery in Activities of Daily Living, Communication/Language Development, Career Education, and any combination of the three curriculum areas ranged from 47 to 55.3 percent (see Table 3). This was similar to last year's range which was from 45 to 57 percent.

Table 2

Frequency Distribution of the Number of Skills Mastered by Students[a]

(N = 1,189)

Number of Objectives Mastered	Number of Students	Percent of Students	Cumulative Percent
12	1	0.1	0.1
11	11	0.1	0.2
1	6	0.5	0.7
9	7	0.6	1.3
8	3	0.3	1.5
7	7	0.6	2.1
6	38	3.2	5.3
5	70	5.9	11.2
4	488	41.0	52.2
3	306	25.7	78.0
2	165	13.9	91.8
1	55	4.6	96.5
0	42	3.5	100.0

Source: OREA-developed student Data Retrieval Forms

[a]Only those students who attended 20 sessions or more were included in the analysis.

[b]The total number of objectives measured by all assessment instruments.

- *Seventy-eight percent of students mastered three or more objectives.*
- *Fifty-two percent of students mastered four pr more objectives.*

Table 3

Students who Mastered 75 Percent
of their Objectives
in Targeted Curriculum Areas

Curriculum Area	Total Number of Students[a]	Students Mastering 75 Percent of Their Objectives	
		Number	Percent
Activities of Daily Living[b]	58	29	50.0
Communication/ Language Development[c]	184	87	47.3
Career Education[d]	371	186	50.1
Any Combination of the Above Areas[e]	497	275	55.3

Source: OREA-developed Student Data Retrieval Forms

[a] Only those students who attended 20 sessions and attempted a minimum of four objectives were included in the analysis.

[b] B.P.C. strands 3-10, 23, and 24 and Track IV content areas 2 and 6.

[c] B.P.C. strands 18-22, 30, 46-48, 57, and 58 and Track IV content area 4.

[d] Career Education Prevocational Skills Assessment Inventory, B.P.C. strands 25, 26, 33, 39, 42, 44, and 45, and Track IV content area 8.

[e] Students may be included in more than one area. Students may have attempted and/or mastered objectives in different curriculum areas.

- *Overall, more than half of the students mastered 75 percent or more of their objectives in Activities of Daily Living, Career Education, and Combinations or all of the above areas, including Communication/Language Development. In Communication/Language Development, 47.3 percent mastered 75 percent of their objectives.*

Overall, 52 percent of the students mastered 75 percent of their objectives. This outcome is lower than the proposed 80 percent, so the evaluation objective was not met.

A breakdown of student mastery as measured by each assessment instrument is given in Table 4. Since fewer than 80 percent of the students mastered 75 percent of their objectives as measured by each of the assessment instruments, the evaluation objective was not met. However, student performance in 1989-90 was superior to that of 1988-89 in each category (VORT by 3.0 percentage points, Track IV by 3 points, and Career Education by 14.2 points). Overall performance by assessment instruments in 1989-90 was 65.1 percent as compared to 60.9 percent in 1988-89.

Although the program objective (80 percent of students mastering 75 percent of their objectives) was not met, participating students' mastery rate did improve overall and in every category when compared to last year's performance.

Table 4

Students who Mastered
75 Percent of their Objectives as Measured
by each Assessment Instrument[a]

Assessment Students[b]	Total Number of Students	Students Mastering 75 Percent of Their Objectives	
		Number	Percent
VORT	807	512	63.4
Track IV	299	204	68.2
Career Education	51	37	72.5
Any Combination of Instruments	1,157	753	65.1

Source: OREA-developed Student Data Retrieval Forms

[a] Only those students who attended 20 sessions and attempted a minimum of four objectives were included in the analysis.

[b] Student achievement may have been assessed by more than one instrument.

- *A higher percent of students assessed by the Track IV and Career Education Prevocational Skills Assessment Inventory mastered 75 percent of their objectives than did students assessed by the VORT.*

IV. CONCLUSIONS AND RECOMMENDATIONS

The Public Law 89-313 program (C.W. P.L. 89-313), was designed to augment the basic instructional process for special education students formerly educated within state-operated or state-supported schools or institutions. Since 1987 the D.S.E.'s Office of Citywide programs has operated C.W. P.L. 89-313 for students with severe handicapping conditions. It has been staffed by one program coordinator and two resource specialists, who have been responsible for providing teachers of program-eligible students with up-to-date materials and equipment as well as individual consultation, support, and group training in topics related to the C.W. P.L. 89-313 program and student population. This year, staff consisted of one program facilitator and only one teacher trainer. In December, the teacher trainer had to assume the role of acting coordinator, since the coordinator became ill. C.W. P.L. 89-313 also provided funds for the implementation of an Art-in-Residency program.

OREA's evaluation of the C.W. P.L. 89-313 program addressed general and specific issues in the area of program implementation and student achievement. OREA consultants interviewed the acting program facilitator and analyzed site coordinator and equipment user surveys.

Respondents reported that C.W. P.L. 89-313 program was successfully implemented except for the untimely identification of eligible students and arrival of equipment. Equipment users reported extensive use of program equipment in teaching students to acquire new skills. OREA data reflected that 1,320 students had participated in the program and that approximately 1,125 items of equipment, materials and supplies had been ordered.

Respondents were very enthusiastic about the dysphagia and augmentative/ communication workshops, and requested their continuation next year. Arts-in-Residency programs were well received by teachers and students. Inclusion of more students were requested by teachers.

OREA achievement data showed that overall, 52 percent of the students who attended 20 sessions or more mastered 75 percent of their objectives. This outcome was lower than the proposed 80 percent of students, so the evaluation objective was not met.

Based on the findings of this evaluation, the following recommendations are proposed:

- Expedite the timely identification and tracking of program-eligible students, by giving priority to the establishment an effective procedure with the Committee on Special Education.
- Continue staff workshops with experienced presenters that address the needs of the student population.
- Expand the staffing of the C.W. P.L. 89-313 program to include one program facilitator, two experienced teacher trainers, and one clerical assistant. This is crucial for the successful implementation of the program.
- Simplify the ordering process so that equipment arrives on time and students can achieve their I.E.P. goals.